

CASE REPORT

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## Immediate Implant

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### ABSTRACT:

The advent of dental implants was a major break through in the field of dentistry. Immediate implants (Tubinger Sofort implants) have gained a considerable amount of popularity today. This case report presents one such case of immediate implant placement in freshly extracted socket. It highlights the various advantages of immediate implants.

**Key words:** *Immediate Implant, Immediate Extraction, Jumping distance.*

## INTRODUCTION

Dental implants are one of the most popular restorative treatment modality today. The use of dental implants dates back to 1809 when Maggilloo used gold implants. The major break through in the field of implantology was made by Branemark in 1952<sup>1</sup>.

Branemark's protocol recommended complete healing of the alveolar bone before placing the dental implants. This would however lead to long period of waiting. The delayed placement of dental implants also results in alveolar bone reduction<sup>2,3</sup>. Hence popularising the idea of Immediate implants<sup>4</sup>. The following case report discusses one such case of immediate implants.

## CASE REPORT

A 25 year old male patient reported to the dental clinic with a chief complaint of fractured maxillary lateral incisor (12). The fractured tooth could be classified as an Ellis Class IV fracture (Root fracture). Diagnostic casts and radiographs were advised and

the placement of an immediate dental implant was decided after the extraction of the fractured root in order to replace the missing tooth.

After administration of a local anaesthetic agent the remaining part of the fractured root was extracted. Care was taken in order to preserve the buccal cortical plate of bone at the extraction site for the maximum bone to implant contact (BIC). After removing the root the socket was cleaned and curetted to induce fresh bleeding at the site. The preparation of the osteotomy site was completed by sequential drilling. The length of the implant selected for this site was greater than the length of the extracted root, the length of the implant selected was (4.2mm\*13mm). The horizontal jumping distance between the socket wall and the implant surface was filled in by an allograft. After packing in the graft material the site was sutured using 3.0 silk suture. In this case the implant was not loaded immediately.

## DISCUSSION

Immediate implants were introduced in the year 1976 by Willy Schulte. The use of immediate implants has the following advantages - Reduction in the

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procedure time, reduction in surgical procedure, preservation of alveolar bone, maintenance of ideal soft tissue, patient satisfaction <sup>5</sup>. Decrease in the waiting period and preservation of the alveolar bone are one of the main advantages of immediate placement of implants in the fresh extraction sockets.

Studies have shown 50% reduction in the buccolingual width intra-operatively in the healing sockets. Similar studies have been reported by Beagle J.R. et al which showed dimensional changes of 5-7mm of buccolingual reduction and 2-4.4mm of vertical bone loss in the hard and soft tissue. Hence the use of immediate implants in fresh extraction sockets can help preserving the bone<sup>6,7,8,9,10</sup>.

Immediate implant placement may or may not be followed by immediate loading. In this case the concept of delayed loading was preferred.

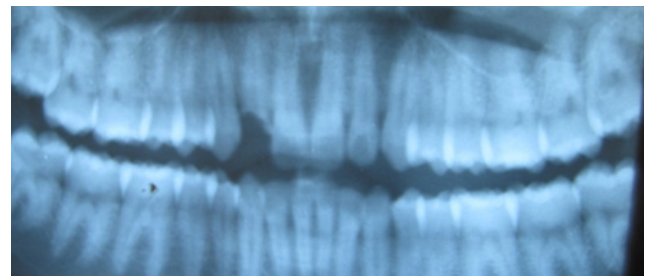
**CONCLUSION**

The case report showed the placement of immediate implant into a fresh extraction socket after removing the fractured root which was retained within the socket. The report also throws light on the various advantages of immediate implant placement.

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**Figure 1:** Pre-operative opg



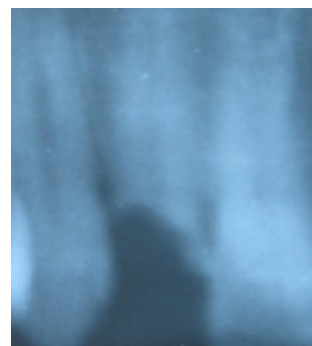
**Figure 2:** Extracted root



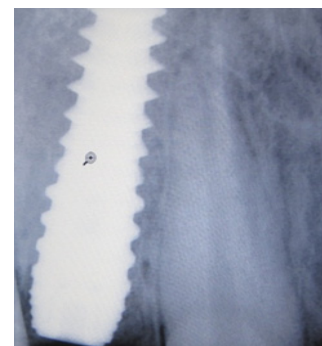
**Figure 3:** Placement of implant



**Figure 4:** Allograft around the implant



**Figure 5:** Pre-operative radiograph



**Figure 6:** Allograft around the implant